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VULNERABLE PLAQUES WITH INTENSIVE YELLOW COLOR BY ANGIOSCOPY HAD HIGH LIPID CORE BURDEN INDEX MEASURED BY NEAR-INFRARED SPECTROSCOPY

Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

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Background: Lipid-rich coronary plaques can be detected by both intracoronary near-infrared spectroscopy and angioscopy. Yellow plaques detected by angioscopy have been reported vulnerable plaques and associated with poor clinical outcomes in many studies. Their yellow color grade is inversely correlated with fibrous cap thickness. However, the comparison between the two devices has not been reported. Therefore, we examined the findings of near-infrared spectroscopy for yellow plaques detected by angioscopy.

Methods: Near-infrared spectroscopy and angioscopy were performed in 15 consecutive patients with stable coronary artery disease who received coronary intervention. Angioscopy detected 29 yellow plaques, which was classified into 3 grades according to the yellow color intensity. Lipid core burden index (LCBI) for each yellow plaque was measured by near-infrared spectroscopy (InfraRedx).

Results: All 29 yellow plaques detected by angioscopy were also detected by near-infrared spectroscopy as yellow signal. LCBI of grade-1 (n=7), grade-2 (n=13), and grade-3 yellow plaques (n=9) were 265±116, 379±79, and 680±192, respectively; and the higher LCBI was observed in the higher color grade yellow plaques by angioscopy ($P<0.001$).

Conclusions: Angioscopically-detected yellow plaques were also detected by near-infrared spectroscopy; and LCBI was higher in the yellow plaques of higher yellow color grade.